WSM BOX II
User Manual

Revisions

Rev.No.	Alternation	Description	Softwatre-Version	Name
005		new creation Source: Wischerbox_vers_005.doc	Betriebsystem-Version: 01.00.00/01 Applikation-Version: 01.00.00 bis 07	Preis Ingenieurbüro 22.08.0
Tag:	Dokument	wiperbox_vers_005_inwork.doc		

Attention!

The device may not be taken into operation as soon as every user has read and understood the manual.

Every unintended use is prohibited.

The users have to be trained in handling the device.

Contents

Contents 3

Pictures 7

Tables 8

Abbreviations 10

1 WSM BOX II-Manipulation Fehler! Textmarke nicht definiert.

1.1 Control Panel 12
1.1.1 Main-Key-Panel 14
1.1.2 Main-Menu-Key-Panel 14
1.1.3 Submenu-Key-Panel 15
1.1.4 Cursor-Key-Panel 15

1.2 WSM BOX II-Display-Panel 16

1.3 WSM BOX II-Manipulation 17
1.3.1 Switching on of WSM BOX II 17
1.3.2 Key Manipulation 18
1.3.2.1 Main-Key 18
1.3.2.2 Main-Menu- and Submenu-Keys 20
1.3.2.2.1 Function-Menu-Structure 20
1.3.2.2.2 Main-Menu-key „Vehicle-Type“ (Typ) 25

2 WSM BOX II Functionality 26

2.1 Special WSM BOX II Functionality 27
2.1.1 Selection of the Vehicle-Type-Application (Typ) 27
2.1.2 Option 28
2.1.2.1 RSM Simulation 28
2.1.2.2 WSM Simulation 28
2.1.2.3 Baud Rate 29
2.1.2.4 Developer-Mode 29
2.1.2.5 Operation-Mode 29
2.1.2.6 LeanCom-Mode 29

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2.1.2.7 LeanCom-Baud-Rate-Save 30
2.1.2.8 Option-Default-Setting 30
2.1.3 Display 30
2.1.3.1 Bus-Logger Function 32
2.1.3.1.1 Bus-Logger-Manipulation 32
2.1.3.1.2 Display-Default-Setting 35
2.1.3.2 Software-Information-Function 35
2.2 Special Functionality of Vehicle-Type-Application 35
2.3 Special Functionality of LeanCom-Application 36
2.3.1 Functions of LeanCom-Configuration 36
2.3.2 Special functions of LeanCom-Application 36
2.3.3 Functions of LeanCom- Application 37

3 WSM BOX II START UP 38

4 Vehicle-Type-Application 41

4.1 DC BR211 41
4.1.1 WSM BOX II Manual Mode 41
4.1.1.1 Main-Keys 41
4.1.1.2 Main-Menu-Key „Func“ 41
4.1.1.3 Main-Menu-Key „WSM“ 41
4.1.1.4 Main-Menu-Key „RSM“ 42
4.1.2 WSM BOX II Test-Bench-Mode 42
4.2 DC-W204 44
4.2.1 WSM BOX II Manual Mode 44
4.2.1.1 Main-Keys 44
4.2.1.2 Main-Menu-Key „Func“ 44
4.2.1.3 Main-Menu-Key „WSM“ 45
4.2.1.4 Main-Menu-Key „RSM“ 46
4.2.2 WSM BOX II Test-Bench-Mode 46
4.3 HYUNDAI-KIA 48
4.3.1 WSM BOX II Manual Mode 48
4.3.1.1 Main-Keys 48
4.3.1.2 Main-Menu-Key „Func“ 48
4.3.1.3 Main-Menu-Key „WSM“ 49
4.3.1.4 Main-Menu-Key „RSM“ 49

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4.3.2 WSM BOX II Test-Bench-Mode 50

4.4 PSA-LIN *52*
4.4.1 WSM BOX II Manual Mode 52
4.4.1.1 Main-Keys 52
4.4.1.2 Main-Menu-Key „Func“ 52
4.4.1.3 Main-Menu-Key „WSM“ 53
4.4.1.4 Main-Menu-Key „RSM“ 53
4.4.2 WSM BOX II Test-Bench-Mode 53

4.5 REN 1200 b/s *55*
4.5.1 WSM BOX II Manual Mode 55
4.5.1.1 Main-Keys 55
4.5.1.2 Main-Menu-Key „Func“ 55
4.5.1.3 Main-Menu-Key „WSM“ 55
4.5.1.4 Main-Menu-Key „RSM“ 56
4.5.2 WSM BOX II Test-Bench-Mode 56

4.6 REN 333 b/s *58*
4.6.1 WSM BOX II Manual Mode 58
4.6.1.1 Main-Keys 58
4.6.1.2 Main-Menu-Key „Func“ 58
4.6.1.3 Main-Menu-Key „WSM“ 58
4.6.1.4 Main-Menu-Key „RSM“ 59
4.6.2 WSM BOX II Test-Bench-Mode 59

4.7 VOLVO-LIN *61*
4.7.1 WSM BOX II Manual Mode 61
4.7.1.1 Main-Keys 61
4.7.1.2 Main-Menu-Key „Func“ 61
4.7.1.3 Main-Menu-Key „WSM“ 61
4.7.1.4 Main-Menu-Key „RSM“ 62
4.7.2 WSM BOX II Test-Bench-Mode 62

4.8 VOLVO P1XV19 *64*
4.8.1 WSM BOX II Manual Mode 64
4.8.1.1 Main-Keys 64
4.8.1.2 Main-Menu-Key „Func“ 64
4.8.1.3 Main-Menu-Key „WSM“ 65
4.8.1.4 Main-Menu-Key „RSM“ 65
4.8.2 WSM BOX II Test-Bench-Mode 66

4.9 VW_LIN_10 *68*
4.9.1 WSM BOX II Manual Mode 68
4.9.1.1 Main-Keys 68
4.9.1.2 Main-Menu-Key „Func“ 68
4.9.1.3 Main-Menu-Key „WSM“ 70
4.9.1.4 Main-Menu-Key „RSM“ 70
4.9.2 WSM BOX II Test-Bench-Mode 71

Pictures

Picture 1 control panel of WSM BOX II. 13
Picture 2 Menu-Struktur 15
Picture 3 WSM BOX II-Display-Panel 16
Picture 4 Switching on of WSM BOX II 17
Picture 5 Main-Key Manipulation and Display. 19
Picture 6 Function-Menu-Structure at Activation of the Function-Menu-Key „Func“ 20
Picture 7 Function-Menu-Structure at Activation of the Function-Menu-Key „Func“ 21
Picture 8 Scrolling of the functions in the Function-Menu-Structure 22
Picture 9 Activation of the Submenu-Key with solidly defined parameter. 23
Picture 10 Submenu-Key for selection of the freely selectable parameter. 24
Picture 11 Selection of the Vehicle-Type-Application. 25
Picture 12 Main-Keys and the Main-Menu for WSM BOX II and Vehicle-Type-/LeanCom-Application 26
Picture 13 Display-Area for the Bus-Logger and Software Information. 31
Picture 14 Display of Data-Communication. 33
Picture 15 Change of representation 34
Picture 16 Showing of further bytes. 34

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Tables

Table 1 Abbreviations....10
Table 2 Main-Key-Panel....14
Table 3 Main-Menu-Key-Panel....14
Table 4 Scrolling of the functions....21
Table 5 Special WSM BOX II Functionality....27
Table 6 Selection of the Vehicle-Type-application....27
Table 7 Operation-Mode....29
Table 8 Option-Default-Setting....30
Table 9 Display-Default-Setting....35
Table 10 Fahrzeugtyp-Applikation spezifische Funktionalität....35
Table 11 Special Functionality of LeanCom-Application....36
Table 12 DC BR211: Main-Keys....41
Table 13 DC BR211: Main-Menu-Key „Func“....41
Table 14 DC BR211: Main-Menu-Key „WSM“....42
Table 15 DC BR211: WSM BOX II Test-Bench-Mode....43
Table 16 DC-W204: Main-Keys....44
Table 17 DC-W204: Main-Menu-Key „Func“....45
Table 18 DC-W204: Main-Menu-Key „WSM“....45
Table 19 DC-W204: Main-Menu-Key „RSM“....46
Table 20 DC-W204: WSM BOX II Test-Bench-Mode....47
Table 21 HYUNDAI-KIA: Main-Keys....48
Table 22 HYUNDAI-KIA: Main-Menu-Key „Func“....49
Table 23 HYUNDAI-KIA: Main-Menu-Key „WSM“....49
Table 24 HYUNDAI-KIA: Main-Menu-Key „RSM“....50
Table 25 HYUNDAI-KIA: WSM BOX II Test-Bench-Mode....51
Table 26 PSA-LIN: Main-Keys....52
Table 27 PSA-LIN: Main-Menu-Key „Func“....52
Table 28 PSA-LIN: Main-Menu-Key „WSM“....53
Table 29 PSA-LIN: Main-Menu-Key „RSM“....53
Table 30 PSA-LIN: WSM BOX II Test-Bench-Mode....54
Table 31 REN 1200 b/s: Main-Keys....55
Table 32 REN 1200 b/s: Main-Menu-Key „Func“....55
Table 33 REN 1200 b/s: Main-Menu-Key „WSM“....56
Table 34 REN 1200 b/s: Main-Menu-Key „RSM“....56

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Table 35 REN 1200 b/s: WSM BOX II Test-Bench-Mode 57
Table 36 REN 333 b/s: WSM BOX II Test-Bench-Mode 58
Table 37 REN 333 b/s: Main-Menu-Key „Func“ 58
Table 38 REN 333 b/s: Main-Menu-Key „WSM“ 58
Table 39 REN 333 b/s: Main-Menu-Key „RSM“ 59
Table 40 REN 333 b/s: WSM BOX II Test-Bench-Mode 60
Table 41 VOLVO-LIN: Main-Keys 61
Table 42 VOLVO-LIN: Main-Menu-Key „Func“ 61
Table 43 VOLVO-LIN: Main-Menu-Key „WSM“ 62
Table 44 VOLVO-LIN: Main-Menu-Key „RSM“ 62
Table 45 VOLVO-LIN: WSM BOX II Test-Bench-Mode 63
Table 46 VOLVO P1XV19: Main-Keys 64
Table 47 VOLVO P1XV19: Main-Menu-Key „Func“ 64
Table 48 VOLVO P1XV19: Main-Menu-Key „WSM“ 65
Table 49 VOLVO P1XV19: Main-Menu-Key „RSM“ 65
Table 50 VOLVO P1XV19: WSM BOX II Test-Bench-Mode 67
Table 51 VW_LIN_10: Main-Keys 68
Table 52 VW_LIN_10: Main-Menu-Key „Func“ 69
Table 53 VW_LIN_10: Main-Menu-Key „WSM“ 70
Table 54 VW_LIN_10: Hauptmenü „RSM “ 71
Table 55 VW_LIN_10: WSM BOX II Test-Bench-Mode 72

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1 General Information

1.1 Abbreviations

Abbreviation	Description
RS	Rain-Sensor
WSM	Wiper-Motor
LeanCom	Bosch internal Communication protocol for strip end control
ST1/ST2	Wiping-Speed 1/ Wiping-Speed 2
INT	Interval-Wiping
AUTO	RS-Wiping
MA	Manual-Mode
TB	Test-Bench-Mode
KL15	Terminal 15
WSM BOX II	the WSM BOX II simulates the Central-Electronics, that heads for the Wiper-Motor and Rain-Sensor
EPS	Park-Position
APS1/2	Alternating-Park-Position 1/2
Terminal 30/ Term. 30	Power Supply Battery
Terminal 31/ Term. 31	Ground
Terminal 15/ Term. 15	Ignition
SPC	stored-program control
UWL	lower wiper change position
OWL	upper wiper change position
PC	Personal computer
LIN	Local Interconnect Network
CAN	Controller Area Network
K-line	serial diagnostics interface
DUT	Device under test
NPS	Negated Park Signal

Table 1 Abbreviations

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1.2 Brief Description

Today's wiper motors with electronic cannot be controlled directly via wiper stick switch. The commands are transmitted via bus systems (CAN, LIN, customer interfaces) to the wiper. The WSM box simulates the wiper functionality of the car and controls the front wiper.

The WSM Box can be delivered as standard or in a 42 V version and with SUB-D connector for the laboratory or with Interconnectron connector for manufacturing.

Three modes are available:

- Manual-Mode via control buttons on the front panel.
- Test-Bench-Mode controlled via automatic tester (SPC).
- Test-Bench-Mode controlled via PC.

1.3 Manual-Mode

1.4 Test-Bench-Mode

1.5 Control via PC

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2 Description

2.1 Connector and Plugs

2.1.1 Connector arrangements at version with SUB-D connector

2.1.2 Connector arrangements at version with Interconnectron connector

2.2 Control Panel

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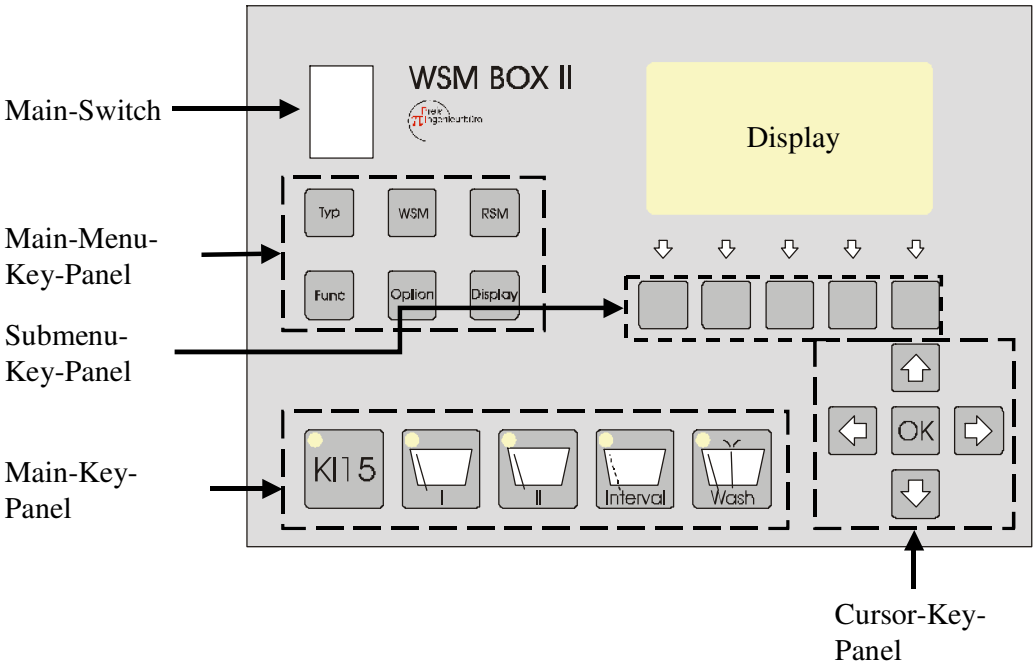


Picture 1 control panel of WSM BOX II.

The control panel of WSM BOX II is structured in four Groups

- Panel 1: Main-Key-Panel
- Panel 2: Main-Menu-Key-Panel
- Panel 3: Submenu-Key-Panel and
- Panel 4: Cursor-Key-Panel

2.2.1 Main-Key-Panel

At the Main-Key-Panel the five Main-Keys represent the following functions

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: Interval-Wiping
	Key 5: Wipe Wash

Table 2 Main-Key-Panel

The LEDs of the Main-Key are used for status indication

- LED ON → Key Function is active.
- LED OFF → Key Function is inactive.

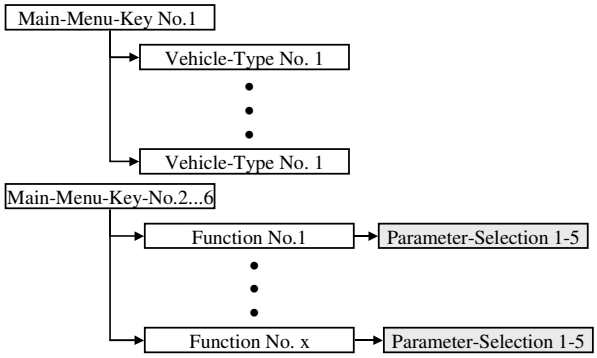
2.2.2 Main-Menu-Key-Panel

At the Main-Menu-Key-Panel the six Main-Menu-Keys represent the following functions

Key	Description
	Key 1: Vehicle-Type-Main-Menu
	Key 2: Main-Menu of Wiper-Motor Functions
	Key 3: Main-Menu of Rain-Sensor Functions
	Key 4: Main-Menu of WSM BOX II Functions
	Key 5: Main-Menu of WSM BOX II Option Functions
	Key 6: Main-Menu for Bus-Logger and Software-Information

Table 3 Main-Menu-Key-Panel

Each Main-Menu contains the functions, that have the structure of the Picture 2.



Picture 2 Menu-Struktur

2.2.3 Submenu-Key-Panel

At the Submenu-Key-Panel the five Submenu-Keys make possible the direct access on the parameters of the functions in the respective Main-Menu of Wiper-Motor/ Rain-Sensor/WSM BOX II functions/Bus-Logger and Software-Information.

The first four Submenu-Keys have solidly defined parameter. At the fifth Submenu-Key the parameter can be select freely. The Parameter-Selection takes place over Cursor-Keys (see Picture 3).

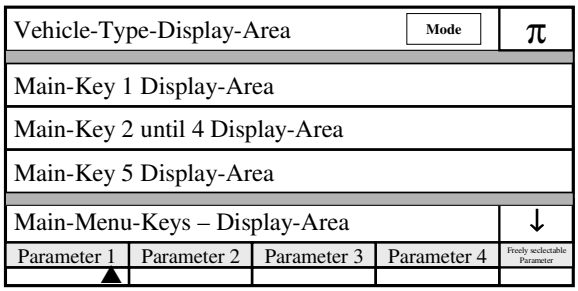
2.2.4 Cursor-Key-Panel

At Cursor-Key-Panel the Cursor-Keys „⬆/⬇“ (Arrow-Up/-Down) enable to scroll the functions in the respective Main-Menu of Wiper-Motor/ Rain-Sensor/WSM BOX II functions/Bus-Logger and Software-Information

At Cursor-Key-Panel the Cursor-Keys „⬅/➡“ (Arrow -Left/-Right) enable to select the freely selectable parameters

At Cursor-Key-Panel the Cursor-Key „**OK**“ enables to activate the chosen vehicle type

2.3 WSM BOX II-Display-Panel



Picture 3 WSM BOX II-Display-Panel

The WSM BOX II-Display-Panel has the following areas

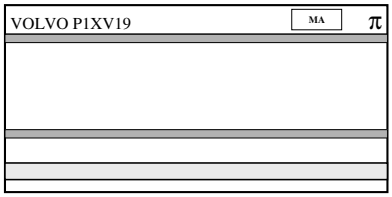
- Vehicle-Type-Display-Area
- Mode-Display-Area (Manual “MA”, Testbench “TP)”
- **π**-Logo Display-Area
- Main-Key No. 1 Display-Area
- Main-Key No. 2 until 4 Display-Area
- Main-Key No. 4 Display-Area
- Display-Area for the functions of the Main-Menu-Keys
- Display-Area for the Scrolling-Direction of the functions in the respective Main-Menu of Wiper-Motor/Rain-Sensor/WSM BOX II functions/Bus-Logger and Software Information. (↑/↓/↕)

↓: Function is the first in the Function-List in the respective Main-Menu-Keys
↕: Function is within the function list in the respective Main-Menu-Keys
↑: Function is the last in the function list in the respective Main-Menu-Keys

- Display-Area for the function parameter.
- Display-Area for the chosen function parameter (▲).

2.4 Handling of WSM BOX II

2.4.1 Switching on of WSM BOX II



Picture 4 Switching on of WSM BOX II

After the WSM BOX II was switched on, the Vehicle-Type-Application and the Mode (MA or TB) are loaded and indicated. The loaded application is the application, which was used before the switching off of WSM BOX II.

2.4.2 Handling of Keys

2.4.2.1 Main-Key

The activation of the Main-Keys activates the functions

- Key 1: Terminal 15
- Key 2: Wiping-Speed 1
- Key 3: Wiping-Speed 2
- Key 4: Interval-Wiping and
- Key 5: Wiper-Wash

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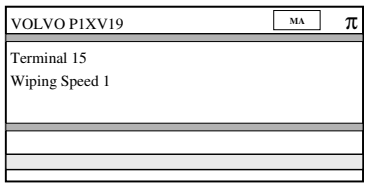
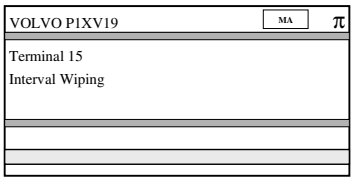
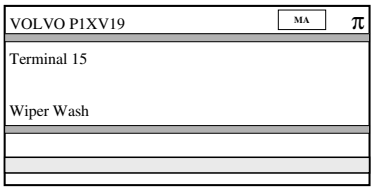
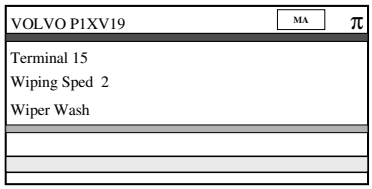
The LED of the activated Main-Key lights up. At the Main-Key-Display Area the function of the activated Main-Key is indicated.

The renewed activation of the Main-Key deactivates the function. The LED goes out. The Main-Key Display Area is deleted.

	
Activation of the Main-Key No.1 and 2	Activation of the Main-Key No.1 und 4
	
Activation of the Main-Key No.1 und 5	Activation of the Main-Key No. 1 3 und 5

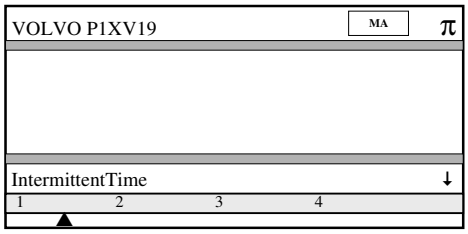
Picture 5 Main-Key Manipulation and Display.

The Main-Key No. 2 until 4 have a common Display-Area. In the common Display-Area the function of the Main-Key is indicated, which was finally activated.
The Main-Keys No. 2 until 4 can not be activated simultaneous. It can be activated One of the Main-Keys in each case.
The Main-Keys No. 1 and 5 can be activated simultaneous with one of the Main-Key No. 2 until 4

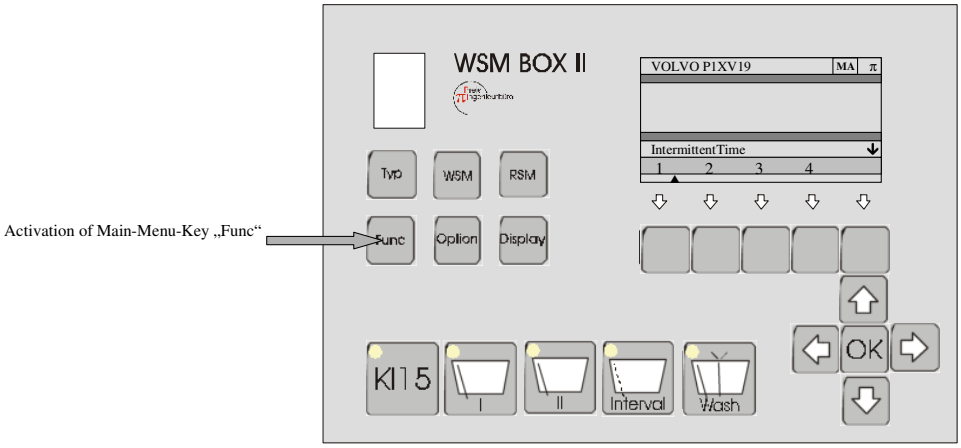
2.4.2.2 Main-Menu- and Submenu-Keys

2.4.2.2.1 Function-Menu-Structure

1. **Function-Menu-Display**
   Each Main-Menu-Key represents a Function-Menu. With the activation of the Main-Menu-Key the Function-Menu-Structure (see Picture 2) is activated and indicated.
   The deactivation of the indicated Function-Menu-takes place through renewed activation of the respective Main-Menu-Key.
   The indicated Function-Menu-Structure belongs to the finally activated Main-Menu-Key



Picture 6 **Function-Menu-Structure at Activation of the Function-Menu-Key „Func“**



Picture 7 Function-Menu-Structure at Activation of the Function-Menu-Key „Func“

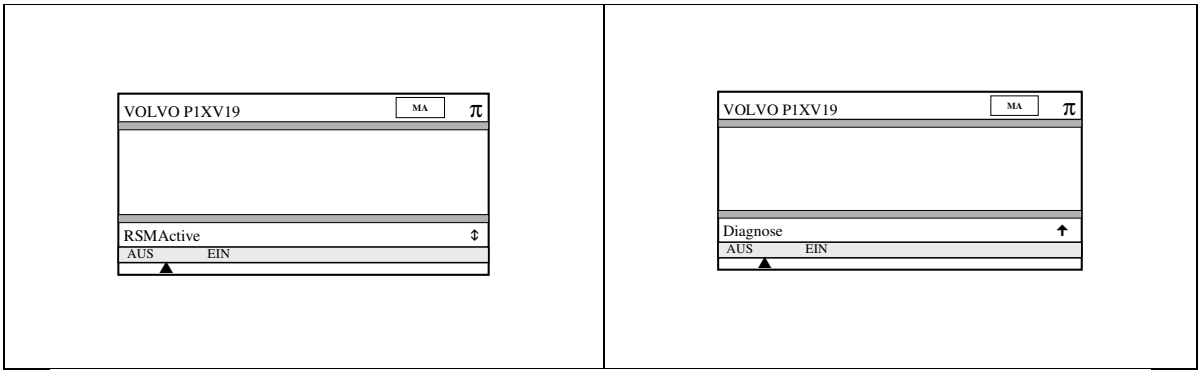
2. Scrolling of the functions

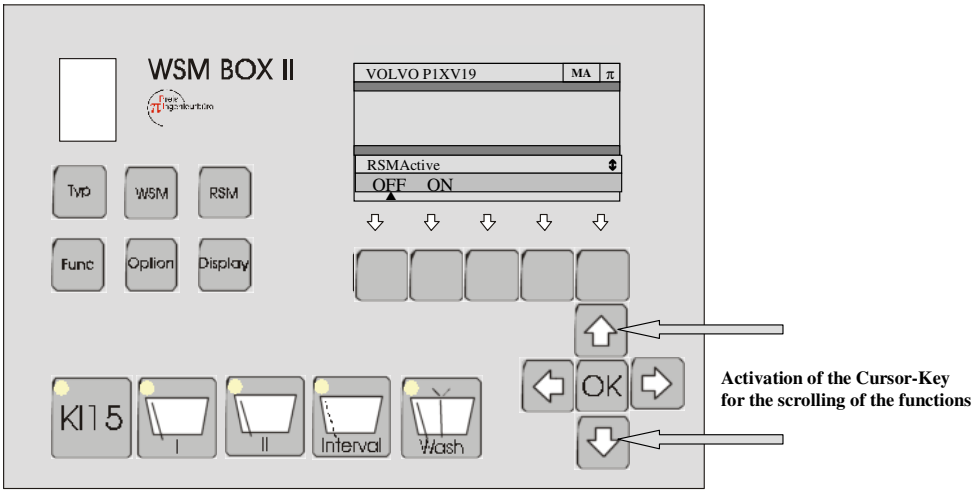
After the Function-Menu-Structure was activated through the Activation of the Main-Menu-Key, the first function in the Function-Menu-Structure is indicated. Further functions can be indicated through scrolling with the Cursor-Keys „⬆/⬇“ (Arrow-Up/-Down).

The Arrows (↑↓↕) in the Display-Area for the Scrolling-Direction of the functions have the following meaning

Arrow	Description
↓	Function is the first in the Function-List in the respective Main-Menu-Keys
↕	Function is within the function list in the respective Main-Menu-Keys
↑	Function is the last in the function list in the respective Main-Menu-Keys

Table 4 Scrolling of the functions



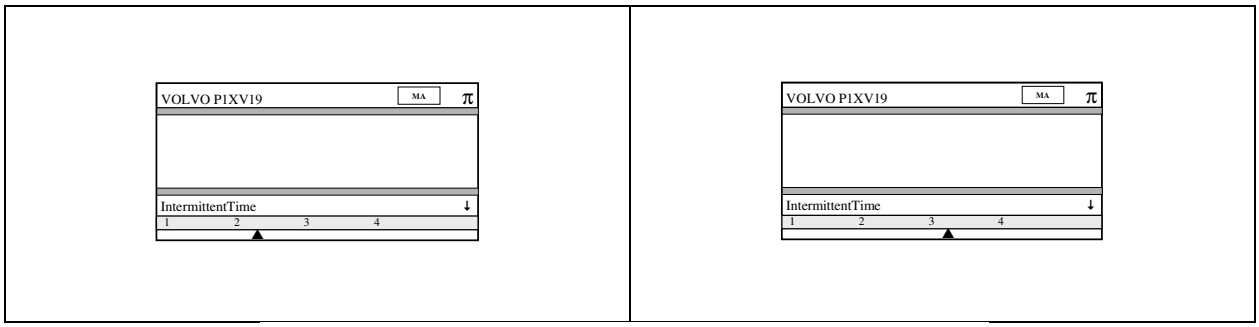


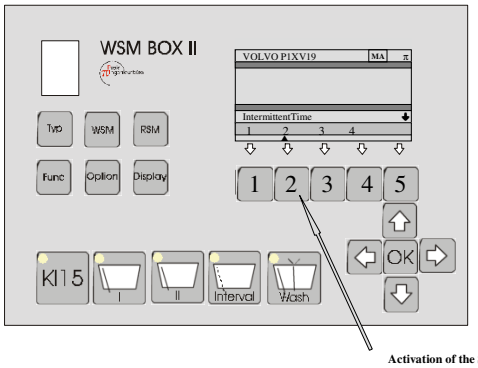
Picture 8 **Scrolling of the functions in the Function-Menu-Structure**

3. Function Parameter

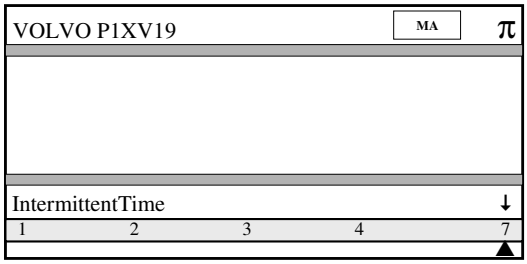
Each function in the Function-menu-Structure has optional five parameters, four solidly defined parameters and one freely selectable parameter. The access on the parameters takes place over the five Submenu-Keys.
The first four Submenu-Keys have in each case a solidly defined parameter. The fifth Parameter at fifth Submenu-Key is freely selectable.

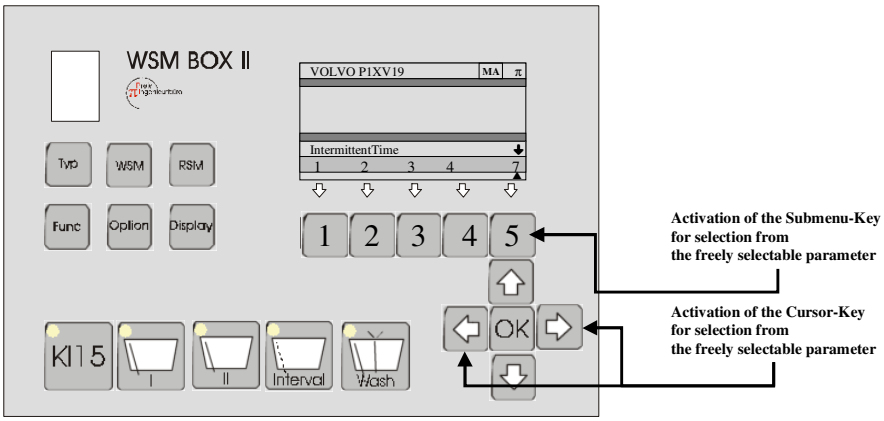
The parameter is chosen through the activation of the Submenu-Keys. The selection from further parameters at the fifth Submenu-Key takes place over the activation of the Cursor-Keys „⬅/➡“ (Arrow-Left/-Right).





Picture 9 **Activation of the Submenu-Key with solidly defined parameter.**

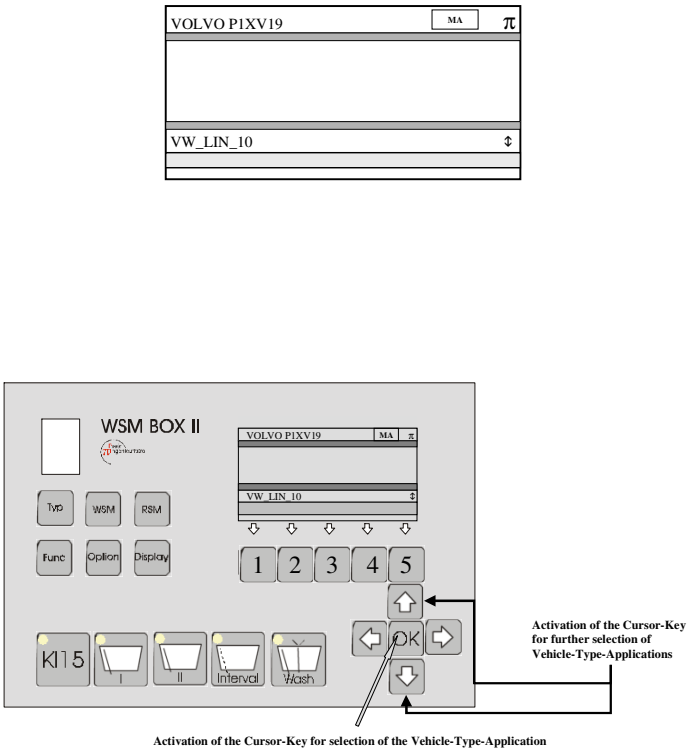




Picture 10 **Submenu-Key for selection of the freely selectable parameter.**

2.4.2.2.2 Main-Menu-key „Vehicle-Type“ (Typ)

This Function-Menu has no parameter. The Function-Menu contains a list of Vehicle-Type-Applications, which are existing in the WSM BOX II.
A certain Vehicle-Type-Application can be chosen through scrolling with the Cursor-Key „⬆/⬇“ (Arrow-Up/-Down).
The chosen Vehicle-Type-Application can be loaded and saved with the activation of the Cursor-Key “**OK”.**



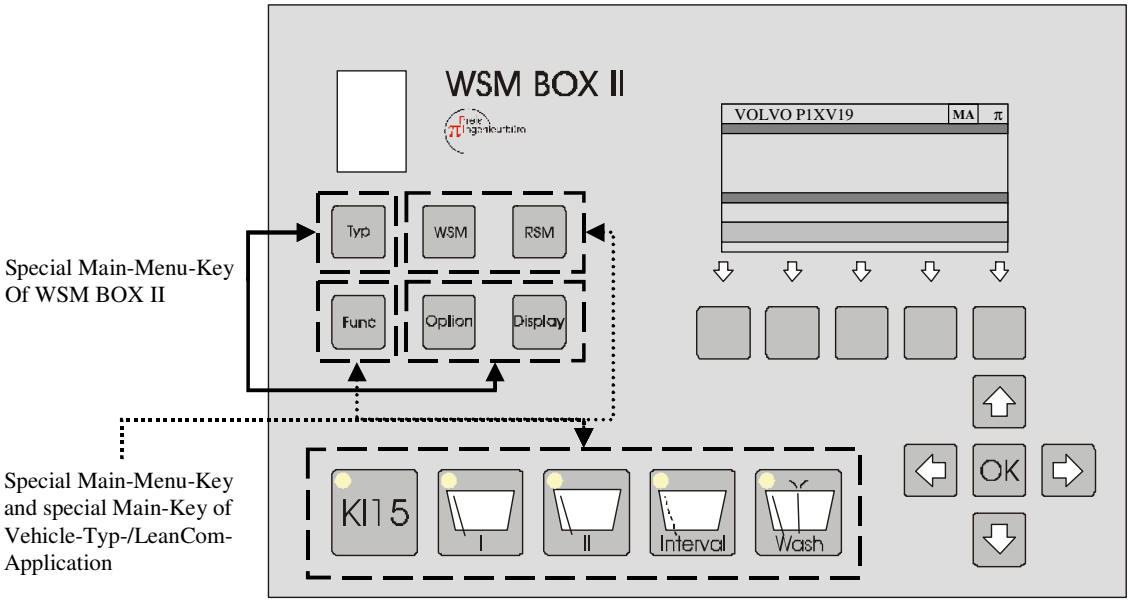
Picture 11 Selection of the Vehicle-Type-Application.

3 WSM BOX II Functionality

The WSM BOX II Functionality is structured in three groups

- special WSM BOX II Functionality
- Special Functionality of Vehicle-Type-Application
- special Functionality of LeanCom-Application

The Main-Keys and the Main-Menu-Keys are structured accordingly (see Picture 12).



Picture 12 Main-Keys and the Main-Menu for WSM BOX II and Vehicle-Type-/LeanCom-Application

3.1 Special WSM BOX II Functionality

Key	Description
Typ	Selection of the Vehicle-Type-Application
Option	Option
Display	Display

Table 5 Special WSM BOX II Functionality

3.1.1 Selection of the Vehicle-Type-Application (Typ)

The different Vehicle-Type-Applications can be chosen with the Main-Menu-Key No. 1 (Typ)

Vehicle-Type-Applications
VOLVO_P1x_V19_LIN.
VW_LIN_10
DC_BR211
DC_W204
PSA_LIN
REN 333b/s
REN 120 b/s
VOLVO_LIN
HYUNDAI_KIA
BMW (noch nicht implementiert)
LeanCOMBasic
VW_DI (it was not yet implemented)
Lancia-Lenkstock-Betrieb (it was not yet implemented)

Table 6 Selection of the Vehicle-Type-application

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3.1.2 Option

The following spezial function options are implemented in the WSM BOX II

- RSM Simulation: Simulation of Rain-Sensor Communication
- WSM Simulation: Simulation of Wiper-Motor Communication
- Baud Rate: 1200 / 9600 / 19200 / 38400 [b/s]
- Developer-Mode: for Showing/hiding of the functions
- Operation-Mode: Manual-Mode / Test-Bench-Mode / PC-Mode
- LeanCom-Mode: for strip end control

3.1.2.1 RSM Simulation

This function “RSM Simulation” is shown, when the function “Developer-Mode” is active. The function “RSM Simulation” is default inactive.
A Rain-Sensor Communication is simulated with the activation of the function “RSM Simulation”. After it, the user can manipulate the functions that were shown at the activation of the Main-Menu-Key “RSM”
When the function “RSM Simulation” is inactive, then the indicative Functions indicates the Status of the function at the activation of the Main-Menu-Key “RSM”

3.1.2.2 WSM Simulation

This function “WSM Simulation” is shown, when the function “Developer-Mode” is active. The function “WSM Simulation” is default inactive.
A Rain-Sensor Communication is simulated with the activation of the function “WSM Simulation”. After it, the user can manipulate the functions that were shown at the activation of the Main-Menu-Key “WSM”
When the function “WSM Simulation” is inactive, then the indicative Functions indicates the Status of the function at the activation of the Main-Menu-Key “WSM”

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3.1.2.3 Baud Rate

This function "Baud Rate" is shown, when the function "Developer-Mode" is active. The function "Baud Rate" have the Default-Setting of the respective Vehicle-Type-Application.

3.1.2.4 Developer-Mode

The function "Developer-Mode" is default inactive. Functions, which are default hidden, are shown with the activation of the function "Developer-Mode". This concers the functionality group:

- Special WSM BOX II Functionality
- Special Functionality of Vehicle-Type-Application
- special Functionality of LeanCom-Application

3.1.2.5 Operation-Mode

This function „Operation-Mode" has the Default-Setting "MANUAL"

Operation-Mode	Description
MANUAL	Manipulation over WSM BOX II Control Panel
TBENCH	Manipulation over external Signals (for example over SPS)
PC	Manipulation over PC (the Functionality was not yet implemented)

Table 7 Operation-Mode

3.1.2.6 LeanCom-Mode

This function is default inactive. When this function is activated, the WSM BOX II changes from Vehicle-Type-Application into LeanCom-Application. During the change the Voltage-Output of the WSM BOX II is switched off for 3 seconds

3.1.2.7 LeanCom-Baud-Rate-Save

This function “LeanCom-Baud-Rate-Save” is shown, when the function “Developer-Mode” is active. The function “LeanCom-Baud-Rate-Save” is default inactive.

Dependent on the Vehicle-Type-Application, it is set a default Baud-Rate during the change in the LeanCom-Application. If the user want to select a other Baud-Rate, then the selection of the other Baud-Rate can take place through the section 3.1.2.3. After it the chosen Baud-Rate should be saved through this function “LeanCom-Baud-Rate-Save”.

3.1.2.8 Option-Default-Setting

The Function-Options have after switching on of the WSM BOX II the following setting

Function-Options	Option	Aktive	Inaktive	Showing	Hiding
RSM Simulation			Yes		Yes
WSM Simulation			Yes		Yes
Baud-Rate			Yes		Yes
Developer-Mode			Yes	Yes	
Operation-Mode	MANUAL			Yes	
LeanCom-Mode			Yes	Yes	
LeanCom-Baud-Rate-Save			Yes		Yes

Table 8 Option-Default-Setting

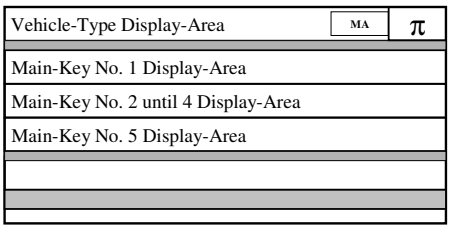
3.1.3 Display

The Main-Menu-Key „Display“ has following functions

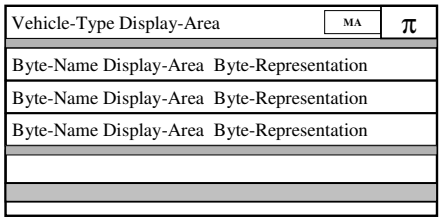
1. Bus-Logger: it enables to observe the Data-Communication on the bus. The representation is byte-by-byte.
2. Software-Information: it enables to show the software version

The functions „Bus-Logger“ and “Software-Information” can not be activated simultaneous. It can be only activated one of the both function in each case.

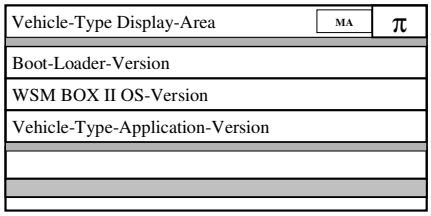
The functions „Bus-Logger“ and “Software-Information” use the Display-Areas of the Main-Key No. 1 until 5 for showing its information. If the function „Bus-Logger“ or “Software-Information” is active, the Information of Main-Key No. 1 until 5 is not shown, if they are activated.



Display-Area for the Main-Menu-Key 1 until 5



Display-Area for the three Bytes



Display-Area for the Software-Version

Picture 13 Display-Area for the Bus-Logger and Software Information.

3.1.3.1 Bus-Logger Function

Three bytes can be shown simultanous. The following Display-Areas

- Display-Area for Main-Key No. 1
- Display-Area for Main-Key No. 2 until 4
- Display-Area for Main-Key No. 5

are used to show the three bytes. Each Display-Area is marked as row

The functions of the Main-Key No. 1 until 5 are not shown, as long as the Bus-Logger-Function is active.

The following functions are shown by activation of the Main-menu-Key "Display"

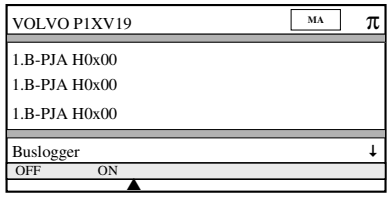
- Bus-Logger: At Activation, the Data-Communication on the bus will be shown
- Sofware-Info: At Activation, the Software Information will be shown (see Abschnitt **Fehler! Verweisquelle konnte nicht gefunden werden.**)

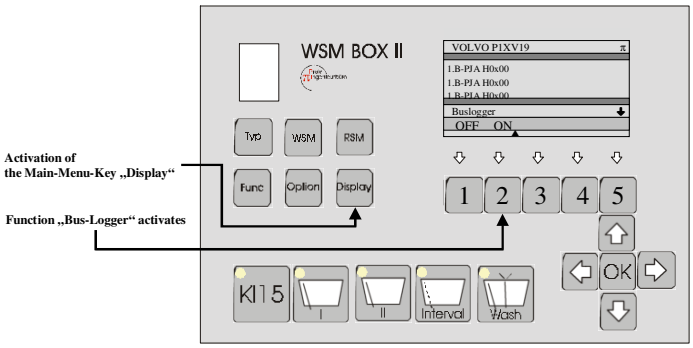
If the Bus-Logger Function is activated, then the function "Sofware-Info" will be unvisible and two further functions are visible.

- Row-Display-Change: the row, which is marked, can be scrolled for showing further Bytes
- HEX/BIN/DEC-Display: Hexal-/Decimal-/Binary-Representation

3.1.3.1.1 Bus-Logger-Manipulation

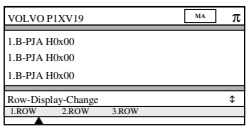
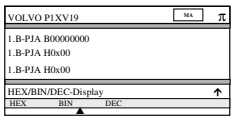
1. It is executed the following steps for showing the Data-Communication on the bus
   - The Main-Menu-Key „Display" is activated
   - The function „Bus-Logger" is chosen and activated





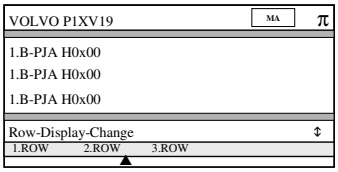
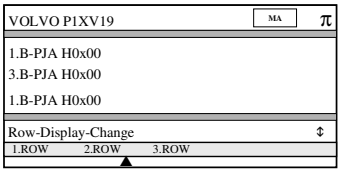
Picture 14 Display of Data-Communication.

2. It is executed the following steps for changing the representation of the corresponding row
   - Chose the Function „Row-Display-Change“ by scrolling over the Cursor-Key „⬆/⬇“ (Arrow-Up/-Down)
   - Chose the row, which is changed (chose parameter 1.ROW, 2.ROW or 3.ROW)
   - Chose the function „HEX/BIN/DEC-Display“ by scrolling over the Cursor-Key „⬆/⬇“ (Arrow-Up/-Down).
   - Chose the representation (chose parameter HEX, BIN orDEC)

	
Change the representation of the first row	Binary-Representation

Picture 15 Change of representation

3. It is executed the following steps for showing further bytes
   - Chose the Function „Row-Display-Change“ by scrolling over the Cursor-Key „⬆/⬇“ (Arrow-Up/-Down)
   - Chose the row, which is changed (chose parameter 1.ROW, 2.ROW or 3.ROW)
   - Further bytes are shown by scrolling over the Cursor-Key „⬅/➡“ (Arrow-Left/-Right)

	
The second row is chosen	Further bytes are shown by scrolling over the Cursor-Key „⬅/➡“ (Arrow-Left/-Right)

Picture 16 Showing of further bytes.

The change of the representation and the scrolling of the bytes are only possible, when the Main-Menu-Key “Display” is activated.

3.1.3.1.2 Display-Default-Setting

Funktionsoption	Option	Aktiv	Inaktiv	Visible	Unvisible
Bus-Logger			yes	yes	
Row-Display-Change	1.ROW				yes
HEX/BIN/DEC-Display	HEX				yes

Table 9 Display-Default-Setting

3.1.3.2 Software-Information-Function

When the Software-Information-Function is active, then it is shown the following informations

- Boot-Loader-Software-Version
- WSM BOX II OS-Software Version
- Vehicle-Type-application-Software-Version

3.2 Special Functionality of Vehicle-Type-Application

The functions of the Vehicle-Type-Application are structured in three groups

Key	Description
	Functions of the Wiper-Motor
	Functions of the Rain-Sensor
	Functions of the WSM BOX II: the WSM BOX II simulates the Central-Electronics, that heads for the Wiper-Motor and Rain-Sensor

Table 10 Fahrzeugtyp-Applikation spezifische Funktionalität

For more, see section **Fehler! Verweisquelle konnte nicht gefunden werden.**

3.3 Special Functionality of LeanCom-Application

The LeanCom-Application can be called within each Vehicle-Type-Application or chosen through the selection of Vehicle-Type-application (see section 3.1.1). The call is activated over the function “LeanCom-Mode” “ (see section 3.1.2.6).

The functions of the LeanCom-Application are structutred in three groups

Key	Description
WSM	Functions of LeanCom-Configuration
RSM	Special functions of LeanCom-Application (for example LeanCom-Stimulus,)
Func	Functions of LeanCom- Application (for example Wiping-Speed 1/2, True-Running)

Table 11 Special Functionality of LeanCom-Application

3.3.1 Functions of LeanCom-Configuration

The following Functions of LeanCom-Configuration are implemented

- Motor-Generation: 1.Generation / 2.Generation
- Variations: 0...255

3.3.2 Special functions of LeanCom-Application

The following special functions are implemented

- LeanCom Init: LeanCom-Stimulus
- Init.delay. time: the output voltage of WSM BOX II is switched on again, when this Init.delay time is expired

The Stimulus-Sequence can be ordered renewed with the function “LeanCom Init” in the LeanCom-Mode. The output voltage of WSM BOX II is switched off for a certain duration at activation of the function “LeanCom Init”. After it, The output voltage of WSM BOX II is switched on again and the Stimulus-Sequence begins immediately. The duration can set through the function “Init.delay. time”

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3.3.3 Functions of LeanCom- Application

The following functions of LeanCom- Application are implemented

- Normal Function: Wiping–Speed 1/2
- True-Runing Function: Left-/Right-Wiping
- Special-Function: Go To Position EPS, APS1/2, Clear-Error-Memory

The Function „Clear-Error-Memory“ can be called during the executing of the functions “Normal Function” and “True-Runing Function”

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4 Status of WSM BOX II START UP at Switching on

The following Informations are saved during the working of WSM BOX II
1. Vehicle-Type-Application
2. Operation-Mode (see section 3.1.2.5)
3. LeanCom-Baud-Rate

After the WSM BOX II was switched on, the Vehicle-Type-Application and the Mode (MA or TB) are loaded and indicated

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5 Starting and Handling

5.1 Setting and connecting the devices

5.2 Connection of a wiper motor with a WSM box via SUB-D connector (laboratory version)

5.3 Connection of a wiper motor with a WSM box via Interconnectron connector (manufacturing version)

5.4 Connection of the WSM Box with Test Bench or PC

5.5 Selection Mode

5.5.1 Manuel Operation

5.5.2 Test bench Operation

5.5.3 PC Operation

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6 Vehicle-Type-Application

6.1 DC BR211

6.1.1 WSM BOX II Manual Mode

6.1.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: --
	Key 5: --

Table 12 DC BR211: Main-Keys

6.1.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
Wischgeschw.	Ja	
Notwischmodus	Ja	
Schwallfunktion	Ja	
Bandende-Pruefung	Ja	

Table 13 DC BR211: Main-Menu-Key „Func“

6.1.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
Ueberwisch-Zone	Ja	
Parkzone	Ja	

Functions	Visible	Unvisible
Blockierung		Ja
Ueberlast	Ja	
Fehler		Ja

Table 14 DC BR211: Main-Menu-Key „WSM“

6.1.1.4 Main-Menu-Key „RSM“

--

6.1.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0…7	
5 (IN_WW)	--	
6 (IN_Heiz)	Stufen Wischen 9…15	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0 / --
	001	Stufen Wischen 1 / 9
	010	Stufen Wischen 2 / 10
	011	Stufen Wischen 3 / 11
	100	Stufen Wischen 4 / 12
	101	Stufen Wischen 5 / 13
	110	Stufen Wischen 6 / 14
	111	Stufen Wischen 7 / 15
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	--
	001	--
	010	--
	011	--
	100	--
	101	--
	110	--
	111	--
14 (D/A-OUT)	--	

25 pins SUB-D female connector-Pin-No.	Functions
15 (IN_AD_4)	--
16 (IN_15)	--
17 (IN_16)	--
18 (OUT_REL8)	--
19 (IN_AD_SONDERF)	--
20 (IN_AD_5)	--
21 --	--
22 IN_AD_FZGTYP	--
23 (IN_AD_6)	--
24 (NPS_OUT)	Parkzone (invertiert)
25 GND	

Table 15 DC BR211: WSM BOX II Test-Bench-Mode

6.2 DC-W204

6.2.1 WSM BOX II Manual Mode

6.2.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 16 DC-W204: Main-Keys

6.2.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
GDO_ExtSw1_Psd		Ja
GDO_ExtSw2_Psd		Ja
GDO_ExtSw3_Psd		Ja
IL_F_Actv		Ja
ISw_Stat		Ja
LgtSens_Enbl		Ja
RainSens_Enbl		Ja
RainSens_NoOprtnPos		Ja
RainSens_Snsty		Ja
Wpr_Stop_ImmRq		Ja
RevGr_Engg		Ja
StandbyMode_Rq	Ja	

Functions	Visible	Unvisible
Wpr_Bl_Ovr	Ja	
Wpr_Pace_ImmRq	Ja	
WprOutsdPkPosn_SAM_		Ja
SwIllLvl		Ja
Wpr_Pace_Rq		Ja
RainSensMon_Rq		Ja
WprOutsdPkPosnTm_SA		Ja
VehSpd L-Byte		Ja
VehSpd H-Byte		Ja
WprSys	Ja	
WprChgPosn_Rq	Ja	
AirTemp_Outsd	Ja	
LgtSens_Snsty		Ja
BodyStyle		Ja
GDO_Prot_Data	Ja	
VehLine		Ja
DewTemp		Ja

Table 17 DC-W204: Main-Menu-Key „Func“

6.2.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
RsErr_WPRA	ja	
WprOutsdPkPosn	ja	
WprOutsdPkPosnTm	ja	
Wpr_Bl	ja	
Wpr_Pace_Stat	ja	
Wpr_Flt	ja	
Wpr_Temp_Excess	ja	
Wpr_SupVolt_Lo	ja	
Wpr_SupVolt_Hi	ja	
Wpr_VehId_Flt	ja	
WprChgPosn_Cnfrm	ja	

Table 18 DC-W204: Main-Menu-Key „WSM“

6.2.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible

Table 19 **DC-W204: Main-Menu-Key „RSM“**

6.2.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	CarCode	
4 (IN_INT) / (IN_Heiz)	Stufen Wischen 0…7	
5 (IN_WW)	WISH-WASH	
6 (IN_Heiz)	Stufen Wischen 8…15	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0 / 8
	001	Stufen Wischen 1 / 9
	010	Stufen Wischen 2 / 10
	011	Stufen Wischen 3 / 11
	100	Stufen Wischen 4 / 12
	101	Stufen Wischen 5 / 13
	110	Stufen Wischen 6 / 14

25 pins SUB-D female connector-Pin-No.	Functions	
	111	Stufen Wischen 7 / 15
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	0
	001	0x0249
	010	0x0492
	011	0x06DB
	100	0x0B6D
	101	0x0DB6
	110	0x0FFF
	111	--
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	
23 (IN_AD_6)	--	
24 (NPS_OUT)	WprOutsdPkPosnTm (invertiert)	
25 GND		

Table 20 DC-W204: WSM BOX II Test-Bench-Mode

6.3 HYUNDAI-KIA

6.3.1 WSM BOX II Manual Mode

6.3.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 21 HYUNDAI-KIA: Main-Keys

6.3.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
IntermittentPauseTime	Ja	
IntermittentWiping	Ja	
LowSpeedWiping	Ja	
HighSpeedWiping	Ja	
GotoServicePosition	Ja	
IgnitionSignal	Ja	
KeyOut	Ja	
AutoCut	Ja	
Zieladresse		Ja
Befehlskennung		Ja
Service_Identifier		Ja
Local_Identifier		Ja
Sende_Parameter_2…6		Ja
Sleep-Mode	Ja	

Functions	Visible	Unvisible
Diagnose	Ja	

Table 22 HYUNDAI-KIA: Main-Menu-Key „Func“

6.3.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
b_lin_FaultInWMM		Ja
b_lin_FaultInWMMActive		Ja
b_lin_HighVoltage		Ja
b_lin_HighVoltageActive		Ja
b_lin_LowVoltage		Ja
b_lin_LowVoltageActive;		Ja
b_lin_Overload		Ja
b_lin_OverloadActive		Ja
b_lin_WiperActive		Ja
b_lin_WiperInWipingArea	Ja	
b_lin_WiperParkedLow	Ja	Ja
Senderadresse		Ja
Antwort		Ja
RService_Identifier		Ja
Response_Code_Data		Ja
SL_Response_Byte5…8		Ja

Table 23 HYUNDAI-KIA: Main-Menu-Key „WSM“

6.3.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
Auto Light Signal	Ja	
Passing Signal		Ja
Head Lamp HighSignal		Ja
Head Lamp LowSignal		Ja
Front Fog Signal		Ja
Tail Signal		Ja
INT	Ja	
TRUN Right Signal	Ja	
TRUN Left Signal	Ja	
Senderadresse		Ja

Functions	Visible	Unvisible
Antwort		Ja
RService_Identifier		Ja
Response_Code_Data		Ja
SL_Response_Byte5…8		Ja

Table 24 HYUNDAI-KIA: Main-Menu-Key „RSM“

6.3.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0,7,14,21,28,35,42,49	
5 (IN_WW)	--	
6 (IN_Heiz)	Stufen Wischen 56,63,70,77,84,91,98,127	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0 / -56
	001	Stufen Wischen 7 / 63
	010	Stufen Wischen 14 / 70
	011	Stufen Wischen 21 / 77
	100	Stufen Wischen 28 / 84
	101	Stufen Wischen 35 / 91
	110	Stufen Wischen 42 / 98
	111	Stufen Wischen 49 / 127
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	--
	001	--
	010	--
	011	--
	100	--
	101	--
	110	--
	111	--
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	

25 pins SUB-D female connector-Pin-No.	Functions
17 (IN_16)	--
18 (OUT_REL8)	--
19 (IN_AD_SONDERF)	--
20 (IN_AD_5)	--
21 --	--
22 IN_AD_FZGTYP	--
23 (IN_AD_6)	--
24 (NPS_OUT)	B_lin_wiperparkedlow (invertiert)
25 GND	--

Table 25 HYUNDAI-KIA: WSM BOX II Test-Bench-Mode

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6.4 PSA-LIN

6.4.1 WSM BOX II Manual Mode

6.4.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 26 PSA-LIN: Main-Keys

6.4.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
BSG-Wischfunktion	Ja	
BSG-Wischfrewuenz	Ja	
WSM-Zieladresse	Ja	
BSG-Befehlskennung	Ja	
Service_Identifier		Ja
Local_Identifier		Ja
Sende_Parameter_2...6		Ja
SG2_Byte1...4		Ja
SG3_Byte1...2		Ja
SLEEP-MODE	Ja	

Table 27 PSA-LIN: Main-Menu-Key „Func“

6.4.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
WSM-Senderadresse		Ja
WSM-Antwort		Ja
RService_Identifier		Ja
Response_Code_Data		Ja
SL_Response_Byte5...8	Ja	
b_lin_Daten_von_CAN	Ja	
b_lin_Status	Ja	
b_lin_Richtung	Ja	
blinPositionzuM	Ja	
Dat_lin_Zeitstempel		Ja
BlinErrDisappearsBl	Ja	
blinErrAppearsBlock	Ja	
blinErrDisappearsMa	Ja	
blinErrAppearsMaSl	Ja	
blinErrDisappearsSl	Ja	
b_lin_Aappears_Sl	Ja	
blinErrDisappearsMa	Ja	
b_lin_Aappears_MA	Ja	

Table 28 PSA-LIN: Main-Menu-Key „WSM“

6.4.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
SG2_State_byte1…8		Ja
SG3_State_byte1…8		Ja

Table 29 PSA-LIN: Main-Menu-Key „RSM“

6.4.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions
1 (IN_ST1)	Wiping-Speed 1
2 (IN_ST2)	Wiping-Speed 2
3 (IN_ST3)	--

25 pins SUB-D female connector-Pin-No.	Functions	
4 (IN_INT)	Service-Position anfahren	
5 (IN_WW)	Stufen Wischen 0…7	
6 (IN_Heiz)	Stufen Wischen 9…15	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 1
	010	Stufen Wischen 2
	011	Stufen Wischen 3
	100	Stufen Wischen 4
	101	Stufen Wischen 5
	110	Stufen Wischen 6
	111	Stufen Wischen 7
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	--
	001	--
	010	--
	011	--
	100	--
	101	--
	110	--
	111	--
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	
23 (IN_AD_6)	--	
24 (NPS_OUT)	--	
25 GND	--	

Table 30 PSA-LIN: WSM BOX II Test-Bench-Mode

6.5 REN 1200 b/s

6.5.1 WSM BOX II Manual Mode

6.5.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 31 REN 1200 b/s: Main-Keys

6.5.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
Light sensitivity	Ja	
Ambient temperature		Ja
Vehicle type		Ja
Vehicle speed	Ja	
Rain-Sensor sensiti	Ja	

Table 32 REN 1200 b/s: Main-Menu-Key „Func“

6.5.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
WSM Park Pos.	Ja	
Operating Status	Ja	

Functions	Visible	Unvisible
Fault detection		Ja

Table 33 REN 1200 b/s: Main-Menu-Key „WSM“

6.5.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
Light intensity	Ja	
Sensor failure		Ja
Auto.lighting	Ja	
Tunnel situation	Ja	
Night situation	Ja	
Rain situation	Ja	
Wiping-Speed	Ja	
Splash mode	Ja	

Table 34 REN 1200 b/s: Main-Menu-Key „RSM“

6.5.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 1...3	
5 (IN_WW)	WISH-WASH	
6 (IN_Heiz)	Stufen Wischen 9…15	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 1
	010	Stufen Wischen 2
	011	Stufen Wischen 3
	100	Stufen Wischen 3
	101	Stufen Wischen 3
	110	Stufen Wischen 3
	111	Stufen Wischen 3
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1)	000	0
	001	1

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25 pins SUB-D female connector-Pin-No.	Functions	
13 (IN_SPEED2)	010	2
	011	3
	100	4
	101	5
	110	6
	111	7
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	
23 (IN_AD_6)	--	
24 (NPS_OUT)	Park (invertiert)	
25 GND	--	

Table 35 REN 1200 b/s: WSM BOX II Test-Bench-Mode

6.6 REN 333 b/s

6.6.1 WSM BOX II Manual Mode

6.6.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: --

Table 36 REN 333 b/s: WSM BOX II Test-Bench-Mode

6.6.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
UCH-ALS Sensitivity	Ja	
UCH-RSM Sensitivity	Ja	
UCH-AngleVariation		Ja
UCH Car-Code		Ja

Table 37 REN 333 b/s: Main-Menu-Key „Func“

6.6.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
WSM-Parking Area	Ja	
Status	Ja	

Table 38 REN 333 b/s: Main-Menu-Key „WSM“

6.6.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
RSM-Wiping-Speed	Ja	
RSM-Splash-Mode	Ja	
Auto.lighting	Ja	

Table 39 REN 333 b/s: Main-Menu-Key „RSM“

6.6.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0…73	
5 (IN_WW)	--	
6 (IN_Heiz)	Stufen Wischen 9…15	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 1
	010	Stufen Wischen 2
	011	Stufen Wischen 3
	100	Stufen Wischen 3
	101	Stufen Wischen 3
	110	Stufen Wischen 3
	111	Stufen Wischen 3
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	--
	001	--
	010	--
	011	--
	100	--
	101	--
	110	--
	111	--
14 (D/A-OUT)	--	

25 pins SUB-D female connector-Pin-No.	Functions
15 (IN_AD_4)	--
16 (IN_15)	--
17 (IN_16)	--
18 (OUT_REL8)	--
19 (IN_AD_SONDERF)	--
20 (IN_AD_5)	--
21 --	--
22 IN_AD_FZGTYP	--
23 (IN_AD_6)	--
24 (NPS_OUT)	PARK (invertiert)
25 GND	--

Table 40 REN 333 b/s: WSM BOX II Test-Bench-Mode

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6.7 VOLVO-LIN

6.7.1 WSM BOX II Manual Mode

6.7.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 41 VOLVO-LIN: Main-Keys

6.7.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
IntermittentTime	Ja	
RSMActive	Ja	
RSMFaultDetected		Ja
RSMFaultConstant		Ja
StalkInSingleStroke	Ja	
GoToServicePosition	Ja	
HoodOpenContact		Ja
Terminal_X	Ja	
VehicleSpeed8bit	Ja	
Sleep-Mode	Ja	

Table 42 VOLVO-LIN: Main-Menu-Key „Func“

6.7.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
WiperActive	Ja	

Functions	Visible	Unvisible
WashingCycleActive	Ja	
WiperParkedLow	Ja	
FaultINWMM		Ja
FaultINWMMActive		Ja
LowVoltageWMM	Ja	
LowVoltageWMMActive	Ja	
HighVoltageWMM	Ja	
HighVoltageWMMActiv	Ja	
OverloadWMM		Ja
OverloadWMMActive		Ja

Table 43 VOLVO-LIN: Main-Menu-Key „WSM“

6.7.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
WipeSpeedRSM	Ja	
SplashDetected	Ja	
Directmode	Ja	
FaultInRSM		Ja
FaultInRSMActive		Ja
AdaptionErrorRSM		Ja
AdaptionErrorRSMAct		Ja

Table 44 VOLVO-LIN: Main-Menu-Key „RSM“

6.7.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0,3,5,7,9,11,13,15	
5 (IN_WW)	WISH-WASH	
6 (IN_Heiz)	--	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 3
	010	Stufen Wischen 5

25 pins SUB-D female connector-Pin-No.	Functions	
	011	Stufen Wischen 7
	100	Stufen Wischen 9
	101	Stufen Wischen 11
	110	Stufen Wischen 13
	111	Stufen Wischen 15
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	0
	001	5
	010	24
	011	40
	100	55
	101	78
	110	102
	111	125
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	
23 (IN_AD_6)	--	
24 (NPS_OUT)	WiperParkedLow (invertiert)	
25 GND	--	

Table 45 VOLVO-LIN: WSM BOX II Test-Bench-Mode

6.8 VOLVO P1XV19

6.8.1 WSM BOX II Manual Mode

6.8.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 46 VOLVO P1XV19: Main-Keys

6.8.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
GoToServicePosition		Ja
HoodOpenContact		Ja
IntermittentTime	Ja	
RSMActive	Ja	
RSMFaultDetected		Ja
RSMFaultConstant		Ja
StalkInSingleStroke		
Terminal_X		
VehicleSpeed8bit		
WindScreenType		Ja
Sleep-Mode	Ja	
Diagnose	Ja	

Table 47 VOLVO P1XV19: Main-Menu-Key „Func“

6.8.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
FaultINWMM		Ja
FaultINWMMActive		Ja
HighVoltageWMM	Ja	
HighVoltageWMMActiv	Ja	
LowVoltageWMM	Ja	
LowVoltageWMMActive	Ja	
OverloadWMM		Ja
OverloadWMMActive		Ja
WashingCycleActive	Ja	
WiperActive	Ja	
WiperInWipingArea	Ja	
WiperParkedLow	Ja	
PARTNOWMM_L9B0…5		Ja
WiperPositionOnWind		Ja

Table 48 VOLVO P1XV19: Main-Menu-Key „WSM“

6.8.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
AdaptionErrorRSM		Ja
AdaptionErrorRSMAct		Ja
Directmode	Ja	
FaultInRSM		Ja
FaultInRSMActive		Ja
SplashDetected	Ja	
WipeSpeedRSM	Ja	
PARTNORSM_L9B0…5		Ja

Table 49 VOLVO P1XV19: Main-Menu-Key „RSM“

6.8.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0,3,5,7,9,11,13,15	
5 (IN_WW)	WISH-WASH	
6 (IN_Heiz)	--	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 3
	010	Stufen Wischen 5
	011	Stufen Wischen 7
	100	Stufen Wischen 9
	101	Stufen Wischen 11
	110	Stufen Wischen 13
	111	Stufen Wischen 15
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	0
	001	5
	010	24
	011	40
	100	55
	101	78
	110	102
	111	125
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	

25 pins SUB-D female connector-Pin-No.	Functions
23 (IN_AD_6)	--
24 (NPS_OUT)	WiperParkedLow (invertiert)
25 GND	--

Table 50 VOLVO P1XV19: WSM BOX II Test-Bench-Mode

6.9 VW_LIN_10

6.9.1 WSM BOX II Manual Mode

6.9.1.1 Main-Keys

Key	Description
	Key 1: Terminal 15
	Key 2: Wiping-Speed 1
	Key 3: Wiping-Speed 2
	Key 4: INT/AUTO
	Key 5: WISH-WASH

Table 51 VW_LIN_10: Main-Keys

6.9.1.2 Main-Menu-Key „Func“

Functions	Visible	Unvisible
LSMBotschaftszaehle		Ja
INT/RS-Stufe	Ja	
Tipp-Wischen	Ja	
Service-Position	Ja	
Haubenkontakt	Ja	
Winterstellung		Ja
Klemme50		Ja
Wendelage Oben		Ja
Wendelage Unten		Ja
Verglasung Offen		Ja
Aussentemperatur		Ja

Functions	Visible	Unvisible
Fzg.Geschw.	Ja	
Sleep-Mode	Ja	

Table 52 VW_LIN_10: Main-Menu-Key „Func“

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6.9.1.3 Main-Menu-Key „WSM“

Functions	Visible	Unvisible
Frontwischer Ein	Ja	
Frontwaschen Ein	Ja	
Wendelagensignal	Ja	Ja
Parklagensignal	Ja	
Wischzyklus-HighB	Ja	Ja
Wischzyklus-LowB	Ja	
Wischer1 Error		Ja
Wischer1 KomError		Ja
Wischer1 Untersp.		Ja
Wischer1 Uebersp.		Ja
Wischer1 Ueberlast		Ja
Ueberlast1ErrorAk		Ja
WaschpumpeErr		Ja
Pumpe-Err-Aktiv		Ja
Wischer2 Error		Ja
Wischer2 KomError		Ja
Wischer2 Untersp.		Ja
Wischer2 Uebersp.		Ja
Wischer2 Ueberlast		Ja
Ueberlast2ErrorAk		Ja

Table 53 VW_LIN_10: Main-Menu-Key „WSM“

6.9.1.4 Main-Menu-Key „RSM“

Functions	Visible	Unvisible
RS-Botschaftzaehler		Ja
RS Wischgeschw.	Ja	
Licht EIN		Ja
Licht EIN Invers		Ja
RS Schwall		Ja
RS Direktmodus		Ja
Verglasung zu		Ja

Functions	Visible	Unvisible
RS Error		Ja
LS Error		Ja
RLS Err Aktiv		Ja
RLS Kom Err		Ja
RLS Unterspa.	Ja	
RLS Ueberspa.	Ja	
RLS Adapt. Err		Ja
Adapt. Err Aktiv		Ja
Helligkeit		Ja
Regenmenge		Ja

Table 54 VW_LIN_10: Hauptmenü „RSM “

6.9.2 WSM BOX II Test-Bench-Mode

25 pins SUB-D female connector-Pin-No.	Functions	
1 (IN_ST1)	Wiping-Speed 1	
2 (IN_ST2)	Wiping-Speed 2	
3 (IN_ST3)	--	
4 (IN_INT)	Stufen Wischen 0,3,5,7,9,11,13,15	
5 (IN_WW)	WISH-WASH	
6 (IN_Heiz)	--	
7 (IN_INT0) 8 (IN_INT1) 9 (IN_INT2)	000	Stufen Wischen 0
	001	Stufen Wischen 3
	010	Stufen Wischen 5
	011	Stufen Wischen 7
	100	Stufen Wischen 9
	101	Stufen Wischen 11
	110	Stufen Wischen 13
	111	Stufen Wischen 15
10 (IN_KL15)	Terminal 15	
11 (IN_SPEED0) 12 (IN_SPEED1) 13 (IN_SPEED2)	000	0
	001	5
	010	24
	011	40
	100	55

25 pins SUB-D female connector-Pin-No.	Functions	
	101	78
	110	102
	111	125
14 (D/A-OUT)	--	
15 (IN_AD_4)	--	
16 (IN_15)	--	
17 (IN_16)	--	
18 (OUT_REL8)	--	
19 (IN_AD_SONDERF)	--	
20 (IN_AD_5)	--	
21 --	--	
22 IN_AD_FZGTYP	--	
23 (IN_AD_6)	--	
24 (NPS_OUT)	Parklagensignal (invertiert)	
25 GND	--	

Table 55 VW_LIN_10: WSM BOX II Test-Bench-Mode

7 Software Version

8 Firmware Update

9 Specification PC Interface

10 Pinning Connectors

10.1 Motor Connector INTERCONNECTRON

10.2 Motor Connector SUB-D

10.3 Connector Test Bench

10.4 Round Connector BUS-Signals

11 Technical Data

11.1 Power Supply

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